

Warren Residence

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[Existing conditions maps and photographs follow this section]

Introduction

The Warren Residence landscape is characterized by the land and home given to Conrad and Nellie Warren as a wedding gift by Con's grandmother, Augusta Kohrs. It includes the complex of buildings associated with the domestic yard, as well as the larger landscape defined by Kohrs-Warren Lane to the north, Business Loop 90 to the east, the railroad corridor to the west, and the Development Zone to the south.

Natural Systems and Features

[see Map EC-15 at the end of this section]

The Warren Residence sits on high ground, located above the floodplain of the North Fork of Johnson Creek. The land slopes moderately south down from the residence to the creek, and then back up to a relatively flat pasture area before reaching the Development Zone. Most of the domestic area, including the surrounding land along the north and east sides, rests on very deep and well drained Beaverell loams that formed in alluvium on stream terraces. The southeast and central portions of this landscape zone consist of Tetonview loams, found elsewhere throughout the lower-lying corrals of the home ranch complex, which are very deep and poorly drained. These soils are associated with the Johnson Creek floodplain, which drains the surrounding area.

Vegetation

[see Map EC-15 at the end of this section]

Native, exotic, and ornamental plants occupy the Warren Residence landscape area. Tall native cottonwoods dominate the narrow riparian zone along the Johnson Creek floodplain, (see Photo 3-4-1). A mix of native and exotic grasses is found in the pasture area to the south, while grass is primarily found in the lawn within the domestic yard.

The domestic yard surrounding the Warren home and outbuildings has several native tree species that have been planted to reinforce the yard's spatial organization, add character, provide shade, and beautify the landscape. These plants include several spruce trees which are generally found along the inside periphery of the fence that surrounds the domestic yard, and cottonwood trees which are primarily located along the rear of the house, near the boat house, and along the periphery of the fence line (see Photo 3-4-2). The cottonwoods found along Johnson Creek to the south visually merge with those found inside the yard and tie the two areas together. Several more spruce trees were located within the domestic yard, but were removed in recent years.

Other tree species include the mountain ash, maple, green ash, and juniper. These, along with shrubs, such as the cotoneaster and juniper shrub are located to the west of the house, near the pump house and at the pedestrian entry gate. Several other shrubs and perennials that were once located along the house foundation and patio were removed in 2001 by the NPS.¹ These include a large spruce located at the rear of the house, a large juniper tree located near the garage, two mountain ash and a juniper shrub at the entrance to the house, and peonies at the rear of the

¹ Vegetation Map, Con Warren Complex HS-58, Based on observations by Lanette King (1994) and drawing by Gary Hansen (1995).

garage.² Several stumps are still visible throughout the yard. In 2003 the NPS initiated removal of the tree stumps and replanting of representative (1934-1958) historic plantings.³

Spatial Organization

[see Map EC-16 at the end of this section]

The spaces located within the Warren Residence landscape are defined by the house and its outbuildings, fences, topography, and the large canopy trees. At the larger scale, the landscape contains four fields. The field to the east of the domestic yard is contained by the wood post and sheep wire fence and elevated road bed of Main Street, the entry lane and wood post and wire mesh fence along the north, the Warren domestic yard to the east, and the Johnson Creek riparian corridor to the south (see Photo 3-4-3).

There are two fields to the west of the Warren yard. The first contains the chicken coop and is defined by the entry lane and wood post and sheep wire fence along its north, south, and west sides, and the Warren domestic yard picket fence on the east (see Photo 3-4-4).

The field to the far west of the house is defined by the entry lane and post and wire fence to the north, the chicken coop field to the east, the jack-leg fence and elevated railroad corridor to the west, and the Johnson Creek riparian corridor to the south (see Photo 3-4-5).

The Stuart Pasture is defined by the Johnson Creek riparian corridor on the north, the fence and drainage swale along Main Street to the east, the jack-leg fence surrounding the Development Zone on the south, and the fence and elevated railroad corridor on the west (see Photo 3-4-6). At times, Warren put late calves here with extra feed.⁴

The spatial organization within the Warren domestic yard is further subdivided into the front, east, and rear, west, yards. The front yard is defined by the vertical plane of the front façade of the house and garage, the front edge of the pump house, and the front fence. The east yard is defined by the vertical plane of house and garage's east elevation, the picket fence, the large spruce trees along the fence, and the clothesline. The rear yard is defined by the clothesline on the north, the large spruce trees and fence along the southeast and along the back of the house, and the fence along the south side. While the back yard is contained by the fence, this area visually extends to Johnson Creek, as the sloping topography and large cottonwoods on the other side of the fence blend together. The west yard is defined by the pump house to the north, the house's west elevation, the fence to the east, and the northern façade of the boathouse.

Land Use

[see Map EC-16 at the end of this section]

From 1991-2002, the administrative office for the Grant-Kohrs Ranch had been located at 212 Missouri Street in the City of Deer Lodge. In 2002 the administrative offices were moved to the Warren Residence. The field located to the south of the Warren residence is used primarily for pasture, especially during visitor season so visitors can see the cattle.

² Grant-Kohrs Ranch National Historic Site, "Compliance Review Form, "Remove Trees Effecting HS-58 Warren Residence," Compliance No. GRKO 01-22 (On file at Grant-Kohrs NHS archives, July 27, 2001).

³ Grant-Kohrs Ranch National Historic Site, "Compliance Review Form, "Plant Vegetation at HS-58 Warren House," Compliance No. GRKO 03-05 (On file at Grant-Kohrs NHS archives, February 10, 2003).

⁴ NPS comments, 75% draft CLR review.

Constructed Water Features

[see Map EC-16 at the end of this section]

A portion of the north fork of Johnson Creek has been placed in a metal culvert to allow vehicles passage to and from the Stuart pasture (see Photo 3-4-7).

The Warren Residence well is located to the west of the residence, below the pumphouse (HS-88). This well, dug in 1934, originally provided water to the residence.⁵ Today the entire site gets its water from the City of Deer Lodge.

Circulation

[see Map EC-16 at the end of this section]

The Warren Residence fronts the historic entry road, Kohrs-Warren Lane, linking the home ranch complex with Main Street (see Photo 3-4-8). Historically this lane was the main entry road to the Grant-Kohrs residence. On axis with the center of the home ranch, this lane was once lined by Cottonwood trees on either side, which were irrigated by a metal pipe. This pipe is still in place.⁶ The Warren residence utilized this same access road; it is still used by the park staff that currently occupies the building.

Two unimproved roads are found near the house. These include the Stuart Pasture Road, which links Kohrs-Warren Lane with the pasture located south of the residence. The other provides access to the Chicken Coop Field. A paved driveway provides access to the garage, and concrete sidewalks provides pedestrian links to the front door of the house. A paved flagstone patio is also located to the east of the residence, just south of the breezeway.

There are several remnant stone paths within the yard. One path leads from the rear of the patio on the east side of the house and continues to the entrance of the boat house. It appears there are several stones missing. Other stepping stones can be found on the west side of the house leading to the picket double gate and the Chicken Coop field. A few other stones are located along the west side of the house; it is assumed that these connected to the front walk.

Views and Vistas

[see Map EC-17 at the end of this section]

Views found within the Warren Residence area are generally contained within this domestic yard. Vegetation to the east, south, and west (as well as the railroad corridor) encloses the landscape and orients views inward toward the house and grounds. From the front of the house, views are oriented outward towards the bull barns and Warren Barn. Views of the Visitor Center area and fairgrounds are prominent from within Stuart Pasture located behind the residence.

Buildings and Structures

[see Map EC-16 at the end of this section]

The following buildings and structures information has been derived from the "National Register of Historic Places Registration Form," the *Conrad and Nellie Warren Residence Historic*

⁵ Cultural Resources & National Register Program Services, *Conrad and Nellie Warren Residence Historic Structure Report* (Santa Fe: National Park Service, Intermountain Support Office, First Draft 2001), V-3.

⁶ Cultural Resources & National Register Program Services, *Conrad and Nellie Warren Residence Historic Structure Report* (Santa Fe: National Park Service, Intermountain Support Office, First Draft 2001), V-37-38; Irrigation information provided by NPS personnel draft review comments.

Structures Report, and supplemented by field observations during the 2002 site visit (see references for full citations).

Within the Warren domestic complex, buildings and structures supported and currently interpret the everyday ranch life of Conrad and Nellie Warren. The centerpiece of the complex is the **Warren Residence** (HS-58), (see Photo 3-4-9) built in 1934. The residence is a one-and-a-half story building with an irregular floor plan and a cross gable roof. The wood-frame house sits on a poured concrete footing foundation. White stucco covers the exterior walls on the north and east elevations while horizontal wood siding covers the south and west elevations, dormers, and front gable end. Red and gray asphalt shingles are set in a random pattern over the roof, which was replaced in-kind in 2002. The north side of the house has an enclosed entrance porch. Other north elevation features include one large picture window, one 16-light wood-sash window with four fixed side lights and eight center lights in an operable casement, and one six-light wood-sash casement window.

A nine-light, one panel door is on the south side of the east elevation. Four 16-light wood-sash windows, with operable centers and fixed side lights, are also located on the east elevation. The south elevation interior stucco chimney is topped with terra-cotta chimney pots. The second floor bedroom window has been replaced with a fire exit window.

The **Garage** (HS-61), (see Photo 3-4-10) is attached to the western elevation of the house by a wood-frame breezeway. The breezeway features horizontal beveled wood siding and three fixed-sash, wood-frame windows. The breezeway is original to the 1934 construction; it was not enclosed until the 1980s. The garage is a one-story, rectangular, wood-frame building constructed on a concrete pad. Gray and red asphalt shingles cover the gable roof. White stucco covers the exterior walls and the gable ends are covered with horizontal beveled wood siding. A wooden, 18-panel, overhead door dominates the north elevation. A centered, one-panel door provides access from the breezeway on the west elevation. Both the south and east elevations contain a centered, six-light, steel casement window.

The **Warren Residence Pump House** (HS-88), (see Photo 3-4-11) was built in 1952 and lies west of the Warren residence. The pump house is a rectangular, half-buried concrete structure with a gabled roof. The structure is exposed to a height of three feet above the ground. The walls are poured-in-place concrete. A hatch door on the south side of the building provides access to the interior. The roof has red asphalt shingles and exposed rafter ends. Five-inch dropped wood siding and 4-inch wood corner trim fill the gable ends. NPS installed a new pump and pressure tank during the 1990s.

Built in 1940, the **Chicken Coop** (HS-59), (see Photo 3-4-12) is a one-story, rectangular, wood-frame building set on a concrete pad and located west of the Warren residence. Red mineral rolled asphalt roofing covers the shed roof and rafter ends are exposed on the north and south elevations. Horizontal wood siding covers the exterior walls. Doors are located on the eastern and western elevations. The south elevation contains seven windows. Two rectangular vents and two chicken doors are located low on the south elevation.

The **Boat House** (HS-60), (see Photo 3-4-13) was constructed in the 1950s as storage for Conrad Warren's sailboat. The boat house is a one-story, rectangular, wood-frame building constructed on a concrete pad. Vertical board-and-batten siding covers the exterior walls. The gabled roof is covered with wood shingles. A four-panel wood door is located on the east elevation. Windows are three-light, wood-frame hoppers. A side-hinged, board-and-batten double garage door dominates the west elevation.

Objects and Small-scale Features

[see Map EC-18 at the end of this section]

Fences and gates around the Warren residence are both utilitarian and ornamental in design. Fences and gates are constructed of both wood and metal, and often combinations of the two.

The most prominent fence type of the component landscape is the **Picket Fence** that surrounds the Warren Residence (see Photo 3-4-14). The fence consists of white-painted, vertical, wooden pickets attached at the top and bottom to horizontal supports. All wood members were replaced in-kind ca. 2001.⁷ The fence surrounds the Warren residence on all sides.

An **Electrical Fence** runs adjacent to the eastern and southern sections, and on the pasture side, of the picket fence (see Photo 3-4-15). This fence consists of short, metal posts supporting a single metal wire that carries some level of voltage. Installed by the NPS, this fence prevents cattle from leaning against, and thus damaging, the picket fence.

Three types of gates are associated with the picket fence: the **Picket Double Gate**, (see Photo 3-4-16) **Picket Single Gate**, (see Photo 3-4-14) and **Wire Mesh Gate**, (see Photo 3-4-17). The double gate is located on the western side of the Warren residence. The wood gate consists of two rectangular frames that swing open at the center. The frames, cross-braced on the interior and attached to hinge-posts at opposite ends, are covered with evenly-spaced white pickets, matching those found on the regular fence.

The picket single gate is located on the north edge of the Warren residence; at the end of a concrete sidewalk leading from the house to the road. The gate is between 3 and 4 feet wide and consists of a square, cross-braced frame. The pickets that cover the frame are taller than the regular pickets and cut to form a rounded top.

The wire mesh gate is also located on the north edge of the Warren residence and encloses the driveway leading to the Warren Garage. The rectangular, metal pipe frame gate is between 12 and 15 feet wide. Wire mesh fills the pipe frame while a diagonal wire brace reaches from the hinge-post to the opposite, lower corner for support.

The small corral surrounding the chicken coop and the larger corral delineating the Warren residence limits are both defined by **Wood Post and Woven Wire Fence**, (see Photo 3-4-16). This fence is typical of other wood and woven wire fences found within the CLR study boundary. Woven Wire fence consists of un-milled wood posts or peeled logs supporting a wire mesh component. Variations of this fence type include metal posts or a combination of wood and metal posts supporting wire mesh. Sheep Wire fence is commonly referred to as woven wire fence. This fence type is also found in this landscape, and is common throughout the ranch. It is bundled in a large roll and, when stretched, it has a strong wire top and bottom. Wire squares are larger on top and smaller on the bottom.

Associated with this fence type is the **Red Wood Gate**, (see Photo 3-4-18) typical of other red gates found within the study boundary. Located on the western edge of the chicken coop corral, this red-painted gate consists of five milled boards attached horizontally to support posts at either end. The gate is braced on each side with a central vertical board and two diagonal boards.

⁷ Grant-Kohrs Ranch National Historic Site, "Compliance Review Form, "Reconstruct Warren House Picket Fence," Compliance No. GRKO 01-01 (On file at Grant-Kohrs NHS archives, January 18, 2001).

Rather than wood post and woven wire fence, **Jack-Leg fence**, (see Photo 3-4-19) is located along the western edge of the Warren Residence landscape. The Jack-Leg fence consists of two posts that are crossed at the top to form X-shapes. These "X-posts" support 4 horizontal rails; the top rail rests in the crux of the X while the remaining three are attached to one of the posts that create the X. A fifth rail is attached to the opposite side of the fence, near the bottom. This arrangement creates an angled, rather than upright fence.

Several other small scale features are located within the Warren Residence component landscape. These include a **fire hydrant** and an **NPS mailbox** located along Warren Lane, directly to the north of the residence (see Photo 3-4-20), as well as a metal garbage can containing a fire hose with two wooden posts on either side. The mailbox post-dates this photo. To the east of the residence, along the inside of the picket fence, is an approximate four foot by four foot square **concrete foundation** that once supported the barbeque stove. A **metal burn barrel** now rests on this foundation (see Photo 3-4-21).

A freestanding **clothes line** structure is located just off the southeast corner of the residence. This is a four-sided metal pipe structure and has been painted dark green. A **concrete bird bath** is located just to the east of the clothes line (see Photo 3-4-22).

Along the north side of the residence, several stepping stones are located within the foundational planting area (see Photo 3-4-23). Found just to the west of the entry porch, these stones are not in their original configuration. Originally they curved from the front door to the front gate, and were subsequently covered/replaced by the covered porch and concrete path.⁸

An approximate three foot by three foot square **concrete trough** is located to the rear of the domestic yard (see Photo 3-4-24). This structure is supported by concrete feet. A **magpie trap** is located further to the south and west, near the north fork of Johnson Creek (see Photo 3-4-7). This is a wooden frame structure constructed of wooden posts, with a concave wood frame top supporting chicken wire mesh. This structure measures approximately five feet by five feet, and the mesh rests approximately three feet off the ground. This structure will likely be removed by the NPS.

Missing & Archeological Resources

[see Map EC-18 at the end of this section]

Based upon analysis of an aerial photograph dating from 1960, two granary foundations are located west of the Warren Chicken Coop (HS-59), west of the road leading south to the Warren pasture. While the granaries are no longer extant, their concrete foundations remain (see Photo 3-4-25). Based upon photographic evidence and staff recollections, these features were removed between 1954 and 1974.

A trailer appears in the 1983 aerial photo, just to the southeast of the chicken coop. This structure was occupied by Ole Berg, a ranch hand and later Con Warren's caretaker (Berg was later joined by his wife, Elizabeth). The trailer was removed in 1993 following Con Warren's death.⁹

During the Warren period, a one inch metal pipe was placed along both sides of the Kohrs-Warren Lane to irrigate the cottonwood trees.¹⁰ While the source of this water is no longer available, the pipes remain.

⁸ NPS comments, 75% draft CLR review.

⁹ NPS comments, 75% draft CLR review.

Other missing small scale features are associated with the Warren domestic landscape. These include a dog house once located east of the house; a swing set once located in the area of the existing patio; a creep feeder southeast of the house in Stuart Pasture; and ornamental plantings, a wooden bridge over the ditch, and sweet pea trellis just southeast of the house, on the slope north of the North Fork of Johnson Creek. A stepping stone path led from the house to across the bridge over the ditch.

¹⁰ NPS comments, 75% draft CLR review.



JMA, October 2002

Photo 3-4-1 : (RA-02) Tall native cottonwoods dominate the narrow riparian zone along the Johnson Creek (north fork) floodplain.



JMA, October 2002

Photo 3-4-2 : (RU-14) Spruce and cottonwood trees dominate the Warren domestic landscape.



JMA, October 2002

Photo 3-4-3 : (RY-23) East Field.



JMA, October 2002

Photo 3-4-4 : (RU-08) Chicken Coop Field.



JMA, October 2002

Photo 3-4-5 : (RU-16) West Field.



JMA, October 2002

Photo 3-4-6 : (RZ-01) Stuart Pasture.



JMA, October 2002

Photo 3-4-7 : (RZ-10) Metal culvert, Stuart Pasture Road, and Magpie Trap.



JMA, October 2002

Photo 3-4-8 : (RU-25) Kohrs-Warren Lane, looking east.



JMA, October 2002

Photo 3-4-9 : (COMP-32) Warren Residence (HS-58).



JMA, October 2002

Photo 3-4-10 : (RY-10) Warren Garage (HS-61).



JMA, October 2002

Photo 3-4-11 : (RV-23) Warren Residence Pump House (HS-88).



JMA, October 2002

Photo 3-4-12 : (RZ -21) Chicken Coop (HS-59).



JMA, October 2002

Photo 3-4-13 : (RZ-24) Boat House (HS-60).



JMA, October 2002

Photo 3-4-14 : (RV-02) Picket Fence and Picket Single Gate.



JMA, October 2002

Photo 3-4-15 : (RU-05) Electrical fence along outside of picket fence.



JMA, October 2002

Photo 3-4-16 : (RX-21) Picket fence and Picket Double Gate. Woven Wire Fence in foreground. Note antenna pole near picket double gate.



JMA, October 2002

Photo 3-4-17 : (RX-08) Wire Mesh Gate.



JMA, October 2002

Photo 3-4-18 : (RY-16) Red Wood Gate.



JMA, October 2002

Photo 3-4-19 : (RU-22) Jack-Leg Fence.



JMA, October 2002

Photo 3-4-20 : (RX-17) Fire hydrant.



Photo 3-4-21 : (RV-10) Concrete foundation and metal burn barrel. Note that the family brands are still visible (the "CK" is Conrad Kohrs; the large "K" is a horse brand; "D-S" is Davis Hanson Stuart; and the right-side-up and upside-down pair of fives is Five Up and Five Down).



Photo 3-4-22 : (RV-11) Clothes line and concrete bird bath.



JMA, October 2002

Photo 3-4-23 : (RV-3) Stepping stones along front of house. This is not the original configuration. When the NPS dug up the vegetation and repaired the drainage, they did not replace the stones in their exact locations and did not photo-document the change. They curved from the front door to the front gate, and were covered/replaced by the covered porch and concrete path.



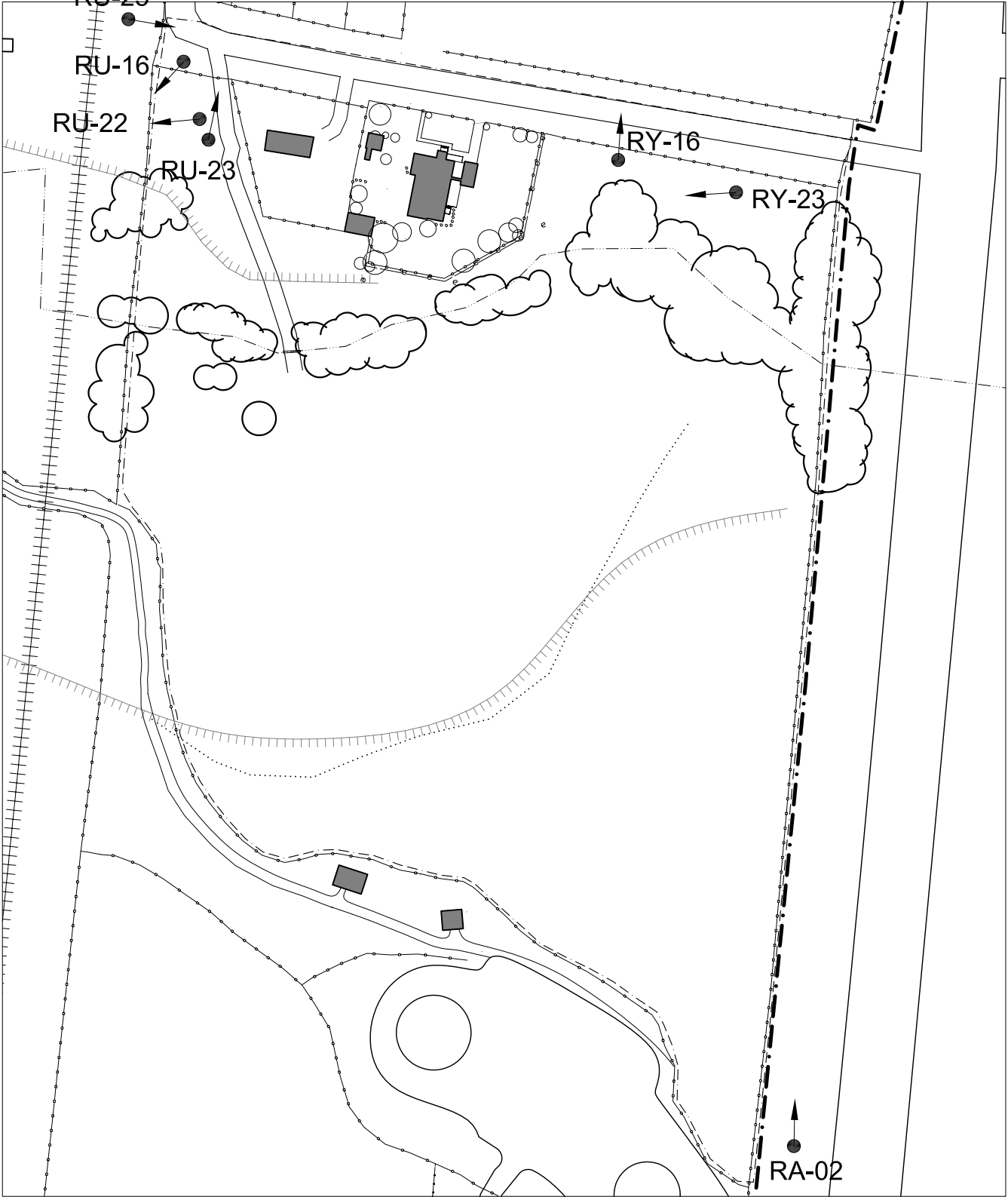
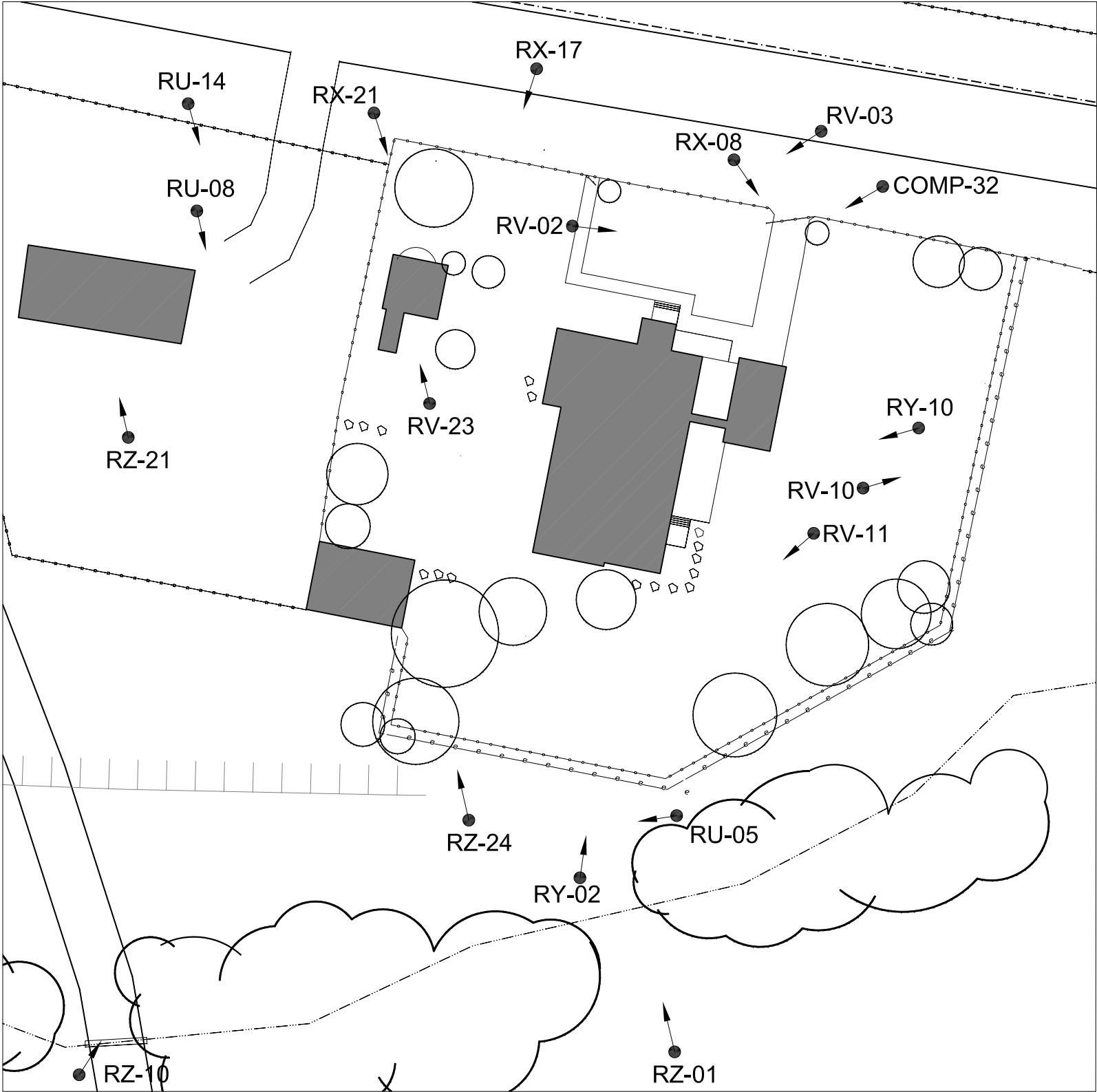
JMA, October 2002

Photo 3-4-24 : (RY-2) Concrete Trough.



JMA, October 2002

Photo 3-4-25 : (RU-23) Remnant concrete granary foundations.



Map Sources: Cultural Resources & National Register Program Services. "Conrad and Nellie Warren Residence, Historic Structure Report. Grant-Kohrs Ranch, National Historic Site, Montana [Draft 1]." (Santa Fe: Intermountain Support Office, 2001); King, Lanette and Hansen, Gary. "Vegetation Map, Con Warren Complex HS-58." Autocad map of field observations during 1994 and 1995. Base mapping referenced to Grant-Kohrs Ranch National Historic Site 1994 aerial photographs and Montana 1:24,000 scale State Plane DRG quadrangles. GIS data was exported into Autocad format for production of base maps and further further detailed with additional data collected in the field.

The following data was provided by the National Park Service, Grant-Kohrs Ranch National Historic Site GIS Program (shapefile format), which was compiled 1998 and updated/field-checked by OCULUS/JMA during the October 2002 site visit: fences and gates; boundary lines; utility lines; fire hydrants; irrigation ditches, headgates, pipes, and risers; culverts; river boundaries; roads; railroad tracks; unvegetated slickens and tailings; fields; trails; cottonwood trees; beaver lodges and dams; hydrology; and groundwater monitoring wells. Metadata for this data is available from World Wide Web: [http://www.nps.gov/gis/metadata/grko/]. Wetlands, hypsography (topography), and Montana 1:24,000 scale State Plane DRG quadrangles were derived from Montana State Library Natural Resource Information System, metadata available from: [http://nris.state.mt.us/gis/data/list.html].

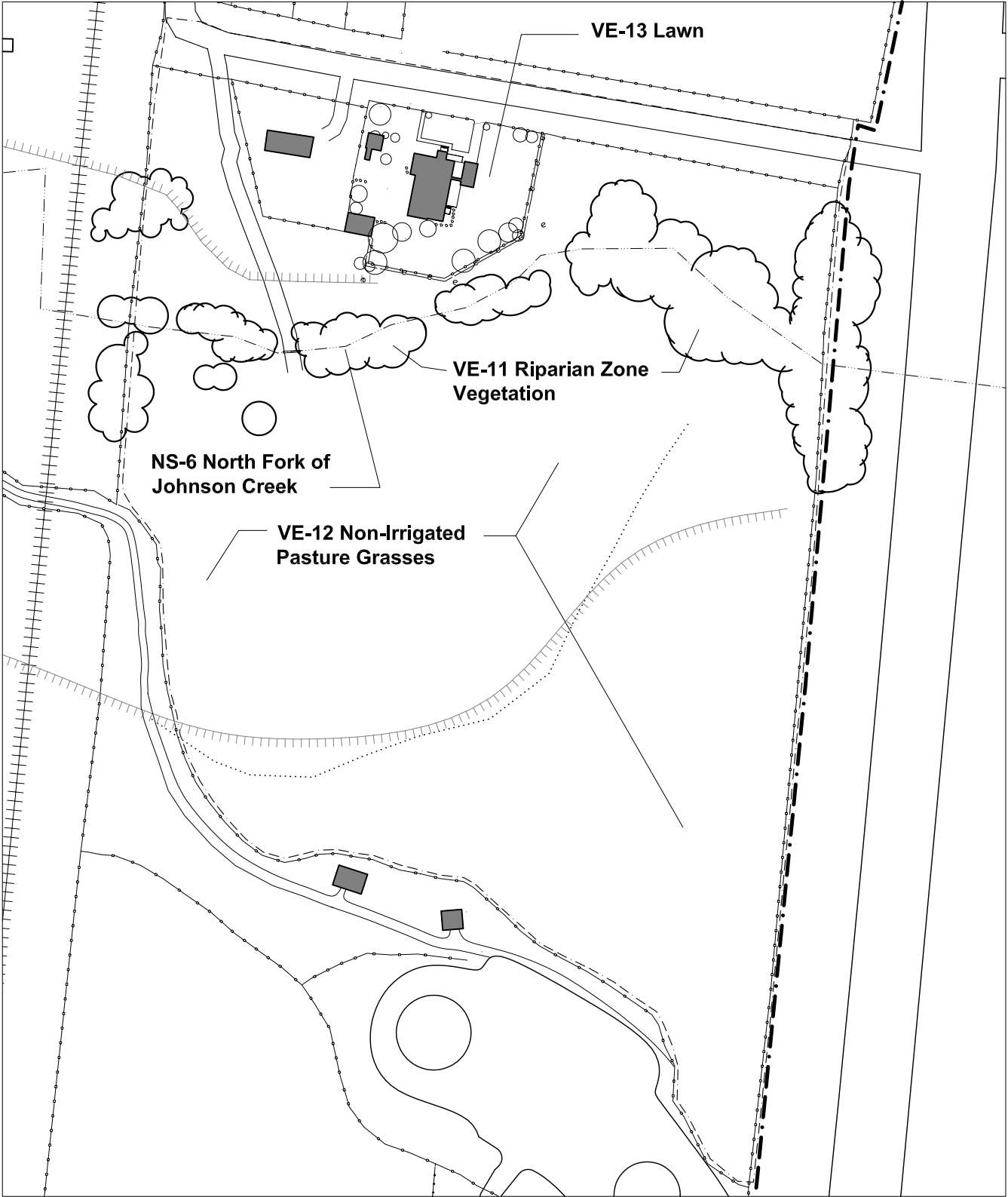
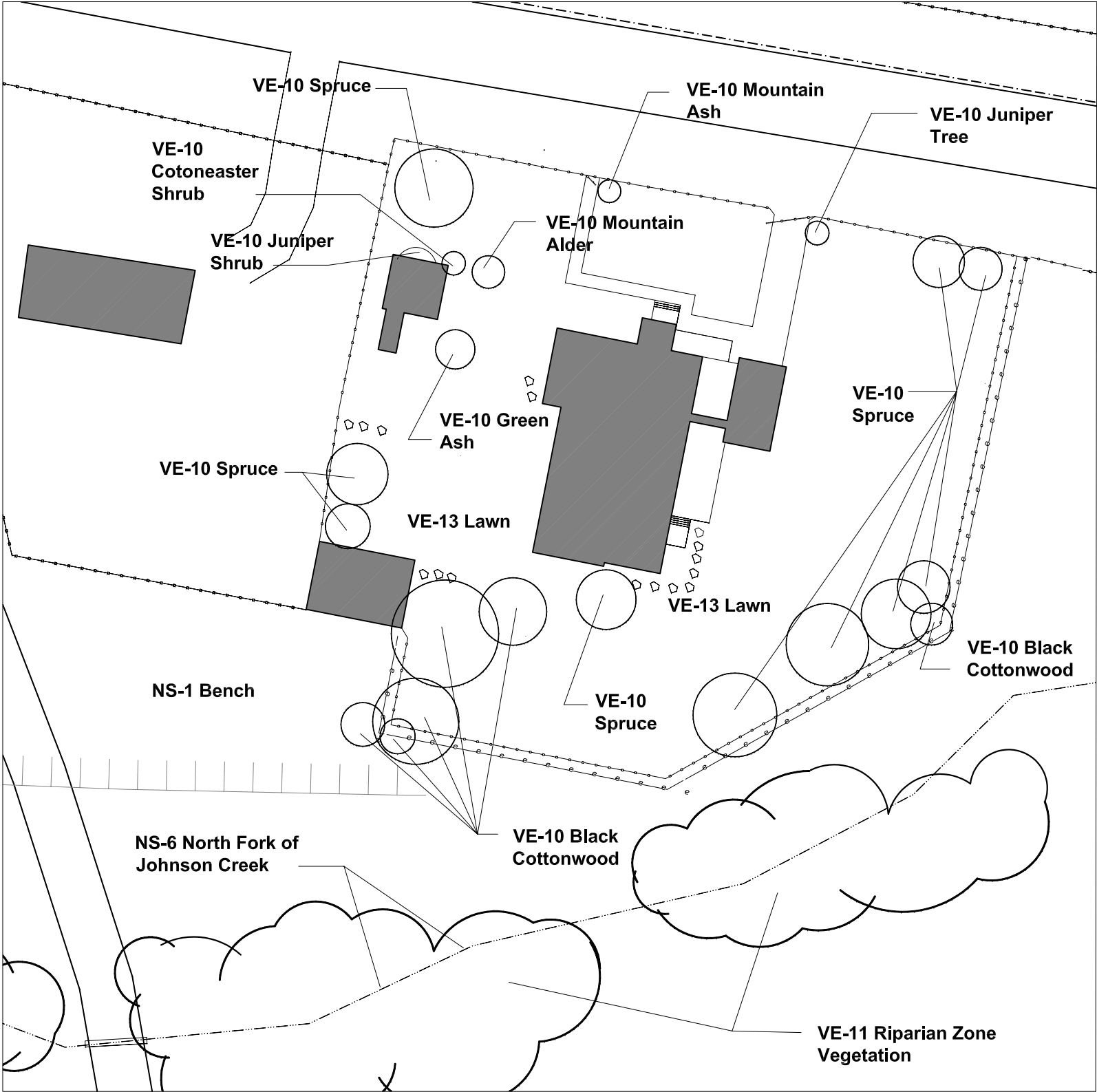
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 - Vegetation
 - Bench
 - Fences
 - Streams/Sloughs
 - Railroad
 - Buildings/Structures
 - Springs
 - Old Ditches
 - Main Ditches
 - Lateral Ditches
 - Component Landscape Boundary Line
 - GRKO Boundary Line
 - Beaver Lodges

Scale: 1" = 40'

Not To Scale



<div>A/E FIRM</div> <div>PRIME NAME: Susan Maxman Architects CITY, STATE: Philadelphia, PA</div> <div>SUBCONTRACTOR NAME: John Milner Associates, Inc. CITY, STATE: Charlottesville, VA</div>	<div>DESIGNED:</div> <div>DRAWN:</div> <div>ADF</div> <div>TECH. REVIEW:</div> <div>KLS, RMM</div> <div>DATE: JULY 2004</div>	<div>SUB SHEET NO.</div> <div>P-6</div>	<div>EXISTING CONDITIONS INVENTORY</div> <div>WARREN RESIDENCE</div> <div>PHOTO STATION POINT MAP</div> <div>GRANT-KOHR'S RANCH NATIONAL HISTORIC SITE</div>	<div>DRAWING NO.</div> <div></div> <div><div>PKG. NO.</div><div></div><div></div><div></div></div> <div><div>SHEET</div><div></div><div></div><div>OF</div></div>
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Scale: 1" = 40'

Not To Scale

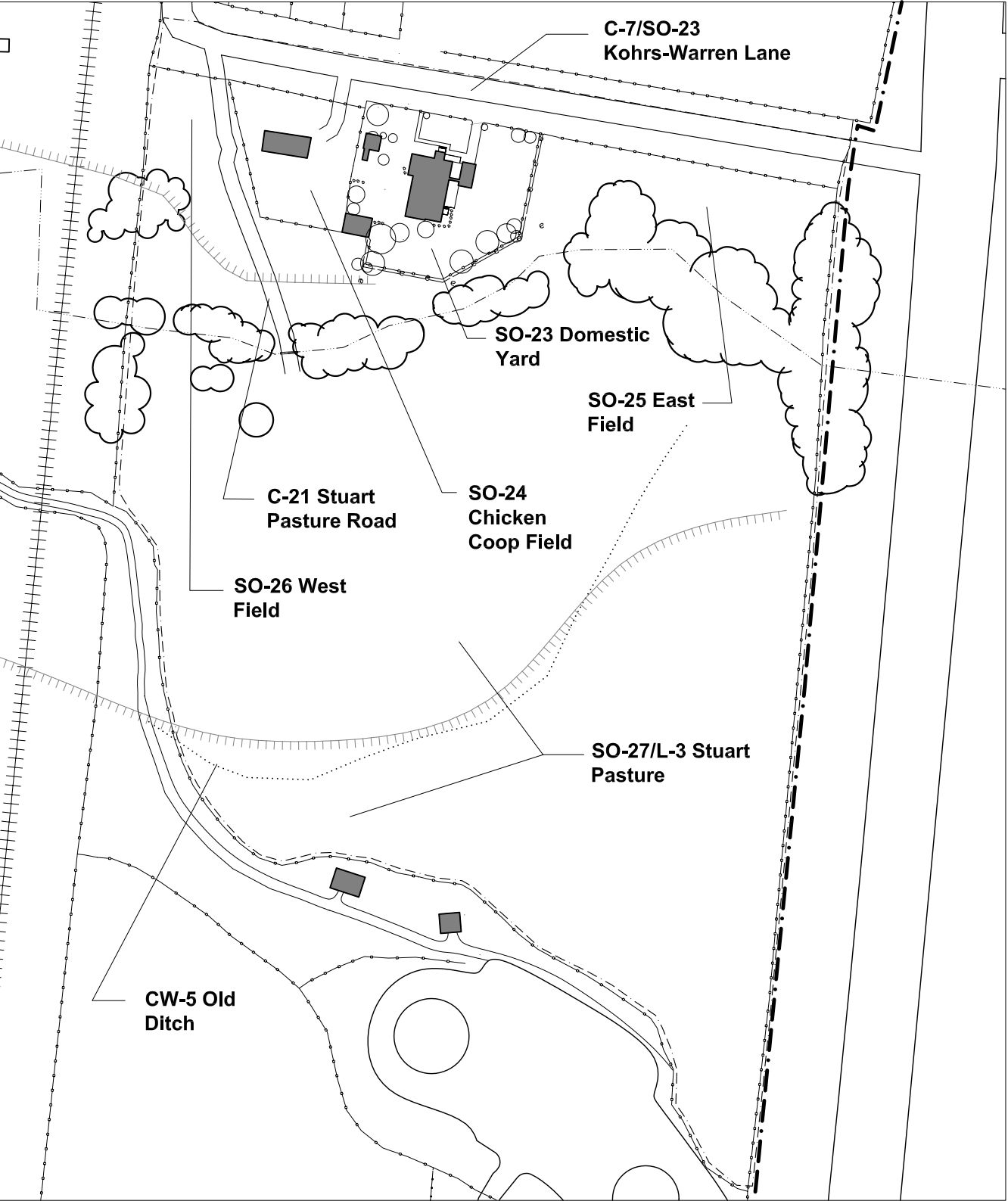
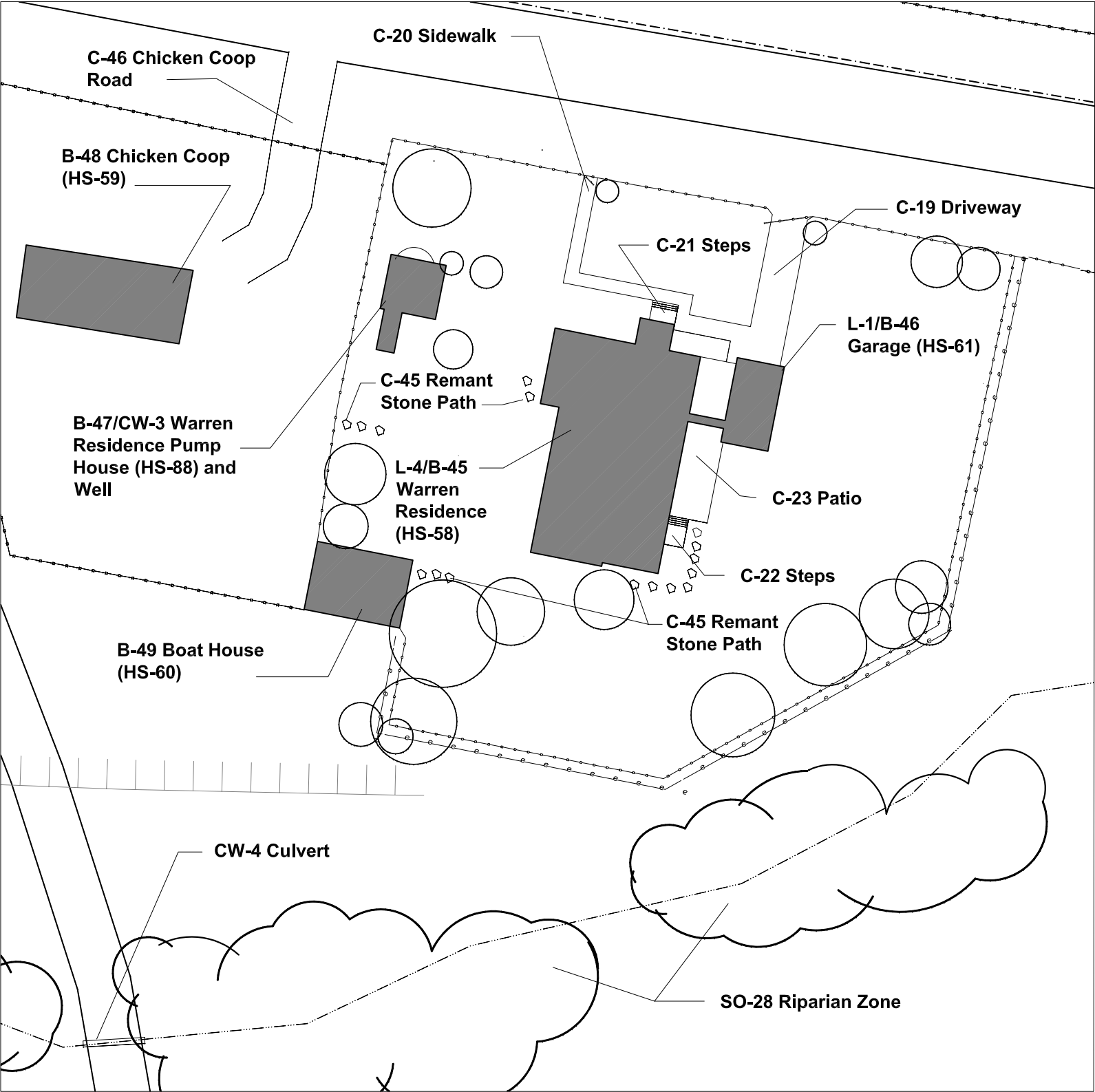
Map Sources: Cultural Resources & National Register Program Services. "Conrad and Nellie Warren Residence, Historic Structure Report. Grant-Kohrs Ranch, National Historic Site, Montana [Draft 1]." (Santa Fe: Intermountain Support Office, 2001); King, Lanette and Hansen, Gary. "Vegetation Map, Con Warren Complex HS-58." Autocad map of field observations during 1994 and 1995. Base mapping referenced to Grant-Kohrs Ranch National Historic Site 1994 aerial photographs and Montana 1:24,000 scale State Plane DRG quadrangles. GIS data was exported into Autocad format for production of base maps and further further detailed with additional data collected in the field.

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- Legend:**
- Roads
 - ++++ Railroad
 - Lateral Ditches
 - Component Landscape Boundary Line
 - GRKO Boundary Line
 - Beaver Lodges
 - ☐ Buildings/Structures
 - Springs
 - Old Ditches
 - Main Ditches
 - ||||| Bench
 - Fences
 - Streams/Sloughs
 - ☁ Vegetation



<div>A/E FIRM</div> <div>PRIME NAME: Susan Maxman Architects CITY, STATE: Philadelphia, PA</div> <div>SUBCONTRACTOR NAME: John Milner Associates, Inc. CITY, STATE: Charlottesville, VA</div>	<div>DESIGNED:</div> <div>DRAWN: JLB, WMW</div> <div>TECH. REVIEW: KLS, RMM</div> <div>DATE: JULY 2004</div>	<div>SUB SHEET NO.</div> <div>EC-15</div>	<div>EXISTING CONDITIONS INVENTORY</div> <div>WARREN RESIDENCE</div> <div>NATURAL SYSTEMS AND VEGETATION</div> <div>GRANT-KOHR'S RANCH NATIONAL HISTORIC SITE</div>	<div>DRAWING NO.</div> <div></div> <div><div>PKG. NO.</div><div></div><div></div><div></div></div> <div><div>SHEET</div><div></div><div>OF</div><div></div></div>
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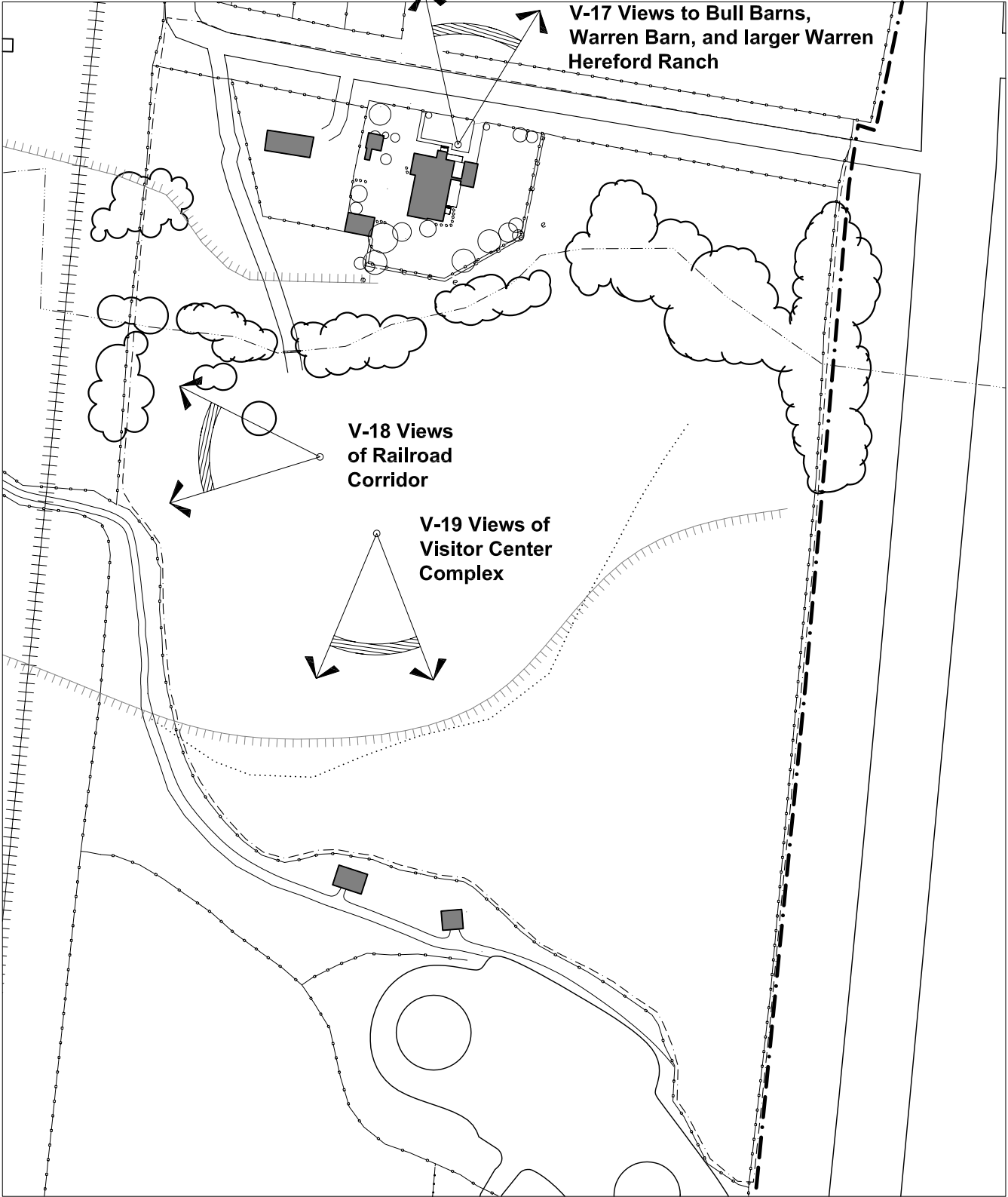
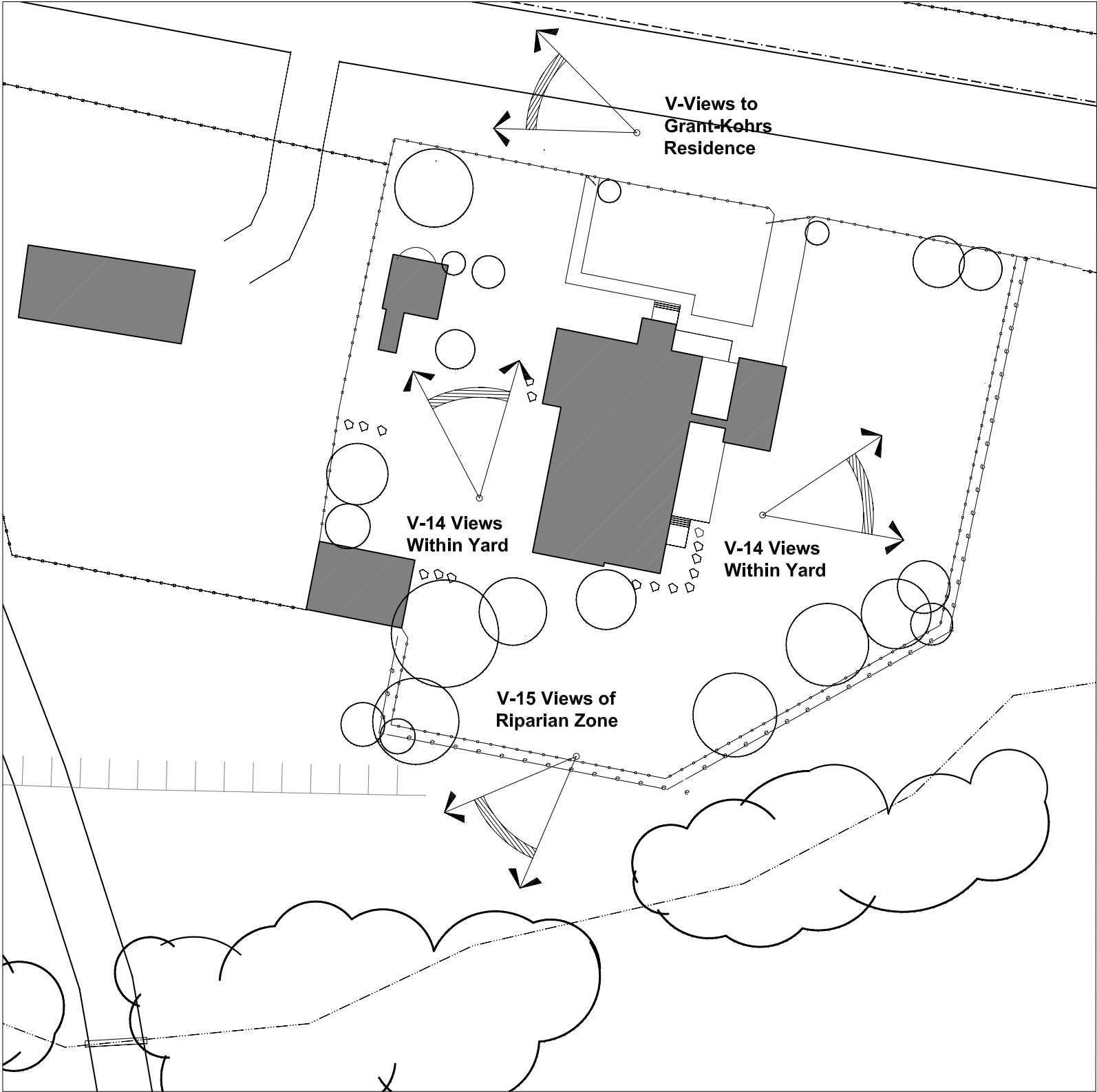
The following data was provided by the National Park Service, Grant-Kohrs Ranch National Historic Site GIS Program (shapefile format), which was compiled 1998 and updated/field-checked by OCULUS/JMA during the October 2002 site visit: fences and gates; boundary lines; utility lines; fire hydrants; irrigation ditches, headgates, pipes, and risers; culverts; river boundaries; roads; railroad tracks; unvegetated slickens and tailings; fields; trails; cottonwood trees; beaver lodges and dams; hydrology; and groundwater monitoring wells. Metadata for this data is available from World Wide Web: [http://www.nps.gov/gis/metadata/grko/]. Wetlands, hypsography (topography), and Montana 1:24,000 scale State Plane DRG quadrangles were derived from Montana State Library Natural Resource Information System, metadata available from: [http://nris.state.mt.us/gis/data/list.html].

- Legend:**

 - Roads
 - Vegetation
 - Bench
 - Fences
 - Streams/Sloughs
- Railroad
 - Buildings/Structures
 - Springs
 - Old Ditches
 - Main Ditches
- Lateral Ditches
 - Component Landscape Boundary Line
 - GRKO Boundary Line
 - Beaver Lodges



<div>A/E FIRM</div> <div>PRIME NAME: Susan Maxman Architects CITY, STATE: Philadelphia, PA</div> <div>SUBCONTRACTOR NAME: John Milner Associates, Inc. CITY, STATE: Charlottesville, VA</div>	<div>DESIGNED:</div> <div>DRAWN: JLB, WMW</div> <div>TECH. REVIEW: KLS, RMM</div> <div>DATE: JULY 2004</div>	<div>SUB SHEET NO.</div> <div>EC-16</div>	<div>EXISTING CONDITIONS INVENTORY</div> <div>WARREN RESIDENCE</div> <div>CIRCULATION, SPATIAL ORGANIZATION, BUILDINGS, STRUCTURES, LAND USE, AND CONSTRUCTED WATER FEATURES</div> <div>GRANT-KOHR'S RANCH NATIONAL HISTORIC SITE</div>	<div>DRAWING NO.</div> <div>PKG. NO.</div> <div>SHEET</div> <div>OF</div>
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Scale: 1" = 40'

Not To Scale

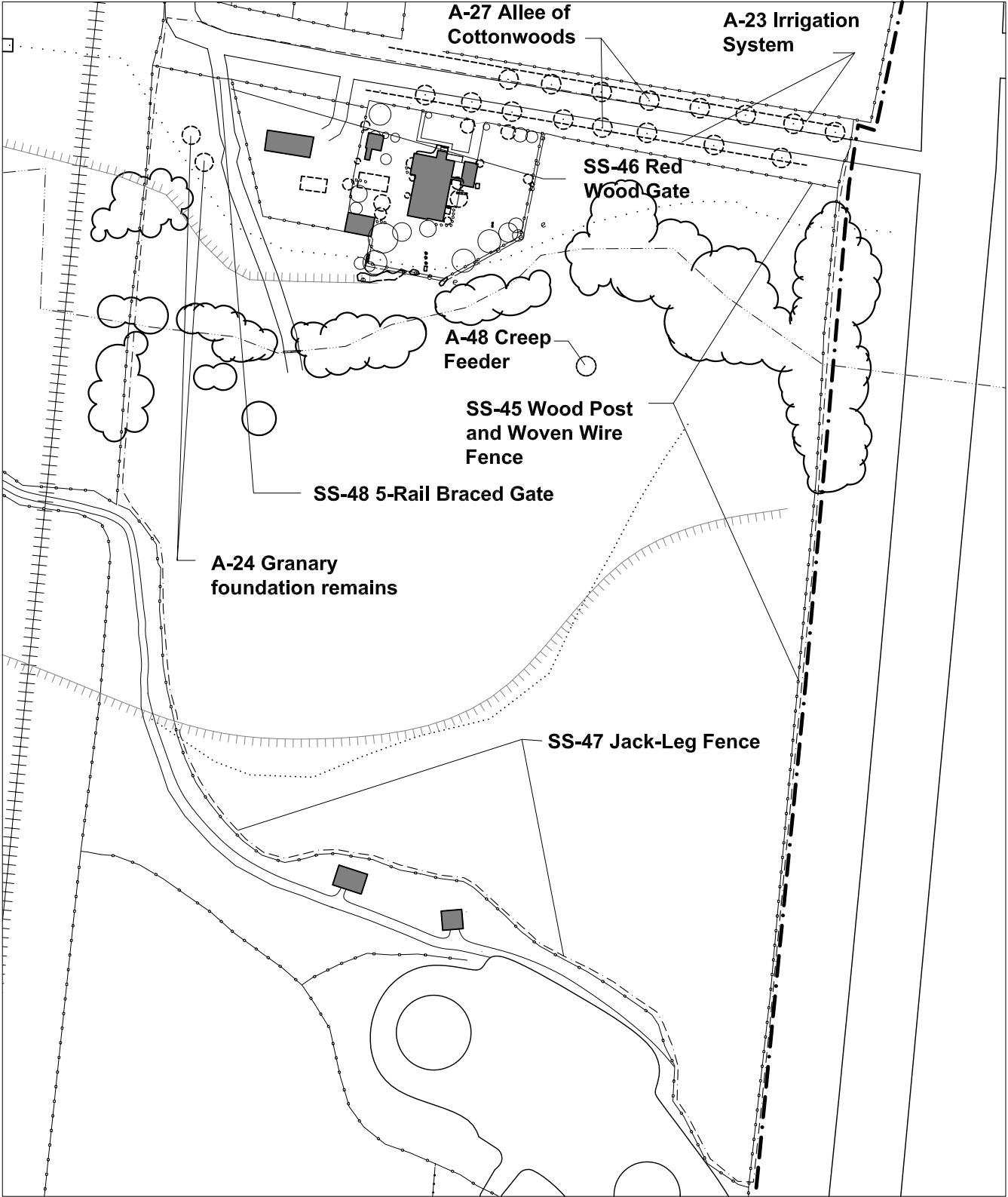
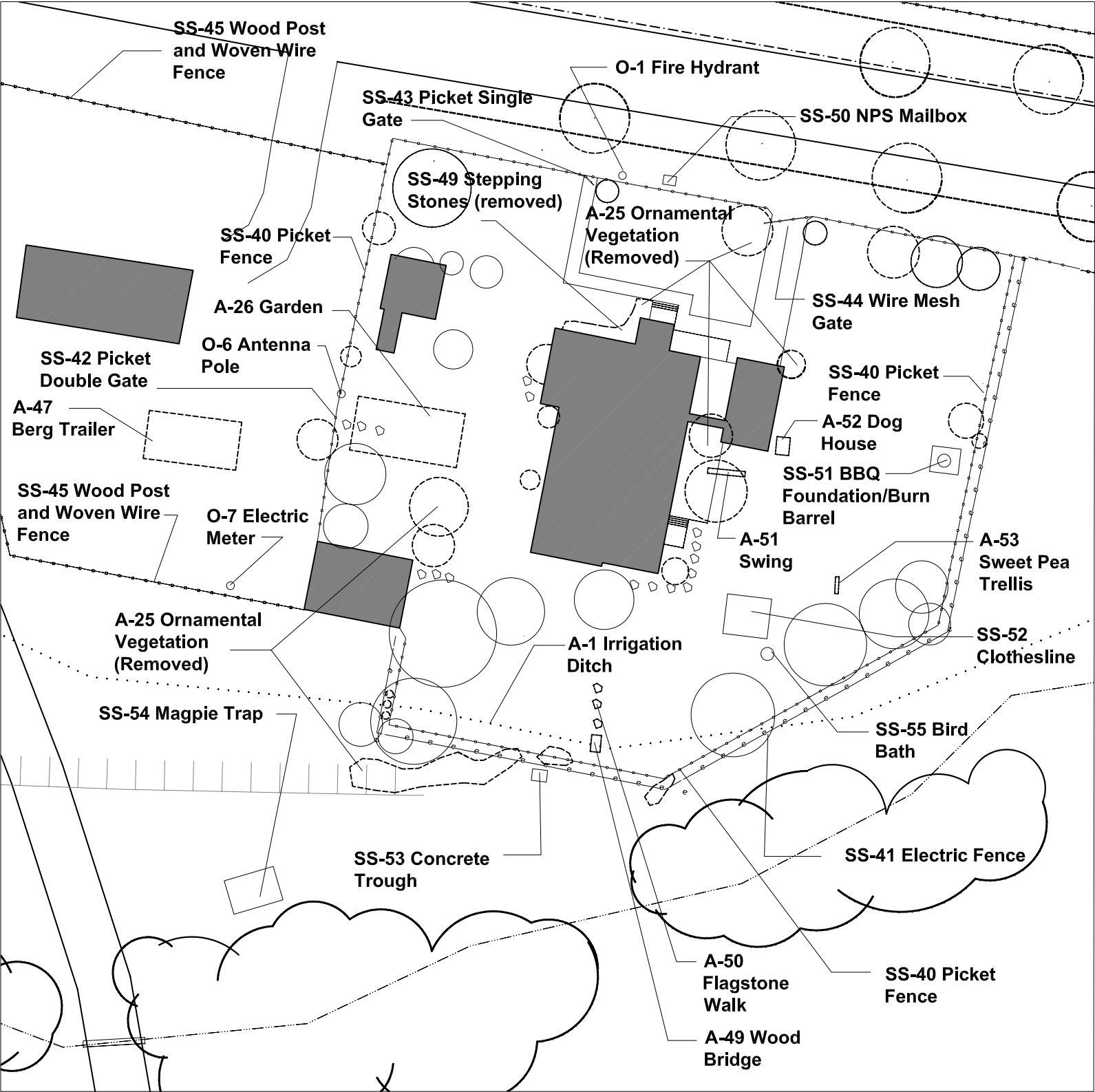
Map Sources: Cultural Resources & National Register Program Services. "Conrad and Nellie Warren Residence, Historic Structure Report. Grant-Kohrs Ranch, National Historic Site, Montana [Draft 1]." (Santa Fe: Intermountain Support Office, 2001); King, Lanette and Hansen, Gary. "Vegetation Map, Con Warren Complex HS-58." Autocad map of field observations during 1994 and 1995. Base mapping referenced to Grant-Kohrs Ranch National Historic Site 1994 aerial photographs and Montana 1:24,000 scale State Plane DRG quadrangles. GIS data was exported into Autocad format for production of base maps and further further detailed with additional data collected in the field.

The following data was provided by the National Park Service, Grant-Kohrs Ranch National Historic Site GIS Program (shapefile format), which was compiled 1998 and updated/field-checked by OCULUS/JMA during the October 2002 site visit: fences and gates; boundary lines; utility lines; fire hydrants; irrigation ditches, headgates, pipes, and risers; culverts; river boundaries; roads; railroad tracks; unvegetated slickens and tailings; fields; trails; cottonwood trees; beaver lodges and dams; hydrology; and groundwater monitoring wells. Metadata for this data is available from World Wide Web: [http://www.nps.gov/gis/metadata/grko/]. Wetlands, hypsography (topography), and Montana 1:24,000 scale State Plane DRG quadrangles were derived from Montana State Library Natural Resource Information System, metadata available from: [http://nris.state.mt.us/gis/data/list.html].

- Legend:**
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 - ++++ Railroad
 - Buildings/Structures
 - Springs
 - Old Ditches
 - Main Ditches
 - Lateral Ditches
 - Component Landscape Boundary Line
 - GRKO Boundary Line
 - Beaver Lodges



A/E FIRM		DESIGNED:
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Scale: 1" = 40'

Not To Scale

Map Sources: Cultural Resources & National Register Program Services. "Conrad and Nellie Warren Residence, Historic Structure Report. Grant-Kohrs Ranch, National Historic Site, Montana [Draft 1]." (Santa Fe: Intermountain Support Office, 2001); 1960 aerial photograph; King, Lanette and Hansen, Gary. "Vegetation Map, Con Warren Complex HS-58." Autocad map of field observations during 1994 and 1995. Base mapping referenced to Grant-Kohrs Ranch National Historic Site 1994 aerial photographs and Montana 1:24,000 scale State Plane DRG quadrangles. GIS data was exported into Autocad format for production of base maps and further further detailed with additional data collected in the field.

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- Legend:**
- Roads
 - ++++ Railroad
 - Lateral Ditches
 - Component Landscape Boundary Line
 - GRKO Boundary Line
 - Beaver Lodges
 - ☼ Vegetation
 - Buildings/Structures
 - Springs
 - Old Ditches
 - Main Ditches
 - ||||| Bench
 - Fences
 - Streams/Sloughs



<div>A/E FIRM</div> <div>PRIME NAME: Susan Maxman Architects CITY, STATE: Philadelphia, PA</div> <div>SUBCONTRACTOR NAME: John Milner Associates, Inc. CITY, STATE: Charlottesville, VA</div>	<div>DESIGNED:</div> <div>DRAWN:</div> <div>JLB, WMW TECH. REVIEW:</div> <div>KLS, RMM DATE:</div> <div>JULY 2004</div>	<div>SUB SHEET NO.</div> <div>EC-18</div>	<div>EXISTING CONDITIONS INVENTORY</div> <div>WARREN RESIDENCE</div> <div>OBJECTS, SMALL-SCALE, & MISSING FEATURES</div> <div>GRANT-KOHR'S RANCH NATIONAL HISTORIC SITE</div>	<div>DRAWING NO.</div> <div></div> <div><div>PKG. NO.</div><div></div><div></div><div></div></div> <div><div>SHEET</div><div></div><div></div><div>OF</div><div></div></div>
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